



Advance Energy Efficient AHU AEE-AHU

Our values



Leadership

We value leadership from every person at every level. Leadership takes responsibility to next level.



Agility

We value responsive action to any demand. Agile organization move quickly to provide solution.



Teamwork

We value people working together to achieve required outcomes. Teamwork amongst trained achievers delivers goals.



Industrious

We value efficient hard work and encourage people to tank initiative to exceed what they have been assigned industrious activity produces results.

Since we began 5 years ago our focus has been driven by connecting with people who appreciate healthy, fresh air in the places where they work, manufacture, live, learn and play. Now more than ever, people are conscious of their wellbeing in a healthier environment. This inspires our passion and commitment to integrate ideas into fresh air solutions reliably energy efficient and economically. That is why at Humidist we strive to exceed our customer expectations by delivering state-of-the-art, Energy Efficient Air conditioning systems that bring fresh air indoors.

Our promises

We will deliver state of the art, energy efficient solutions, to air conditioning consultants and contractors, that will reliably and economically create happier, healthier environments at a price that reflects the engineering and energy efficiency of our systems.

Our Vision

To put Fresh Air/ conditioned recirculation air into Every Building, manufacturing unit.

From the skyscraper to the school room every building, pharma, medicine manufacturing and other needs fresh air/ conditioned recirculation air

Our Purpose

To integrate ideas into Fresh Air / conditioned recirculation air Solutions.

Conditioning fresh/recirculation air is always an engineering challenge. You have the ideas? We integrate these into realizable solutions.



Loyalty

we value loyalty and put trust in people. Loyalty results in positive reciprocal outcomes across our business community

Our Team

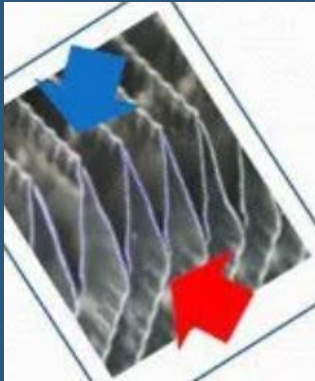
Qualified, experienced, values driven people are at the heart of Humidist. From the first contact through to the final delivery of our energy efficient equipment, our people strive to exceed your expectations.

Our Services

We know that our customers primary call is 'Help me to Deliver a Hassle-Free Project'. Our Design, Engineering and Manufacturing expertise will do exactly that.

Projects

Our projects embrace a multitude of diverse applications for Pharmaceuticals, API, R&D centers, Government, Industrial, Retail, Commercial and Institutional projects.



AIR HANDLING UNIT DETAILS

Humidist are Known air handling unit manufacturer in south India, especially in pharmaceutical . An air handling unit (AHU) is used to condition and circulate air as part of a heating, ventilating and air-conditioning ([HVAC](#)) system. The air entering an AHU usually passes through an air filter, across the heating/cooling coil and then the supply air fan, providing the correct volume and pressure or conditioned air to the ductwork system.

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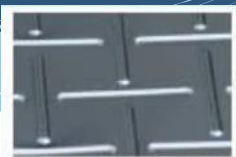
AHUs can incorporate a hot water coil, a chilled water coil, a DX coil refrigerant coil or a combination of these. Condensate drains are provided with the AHUs to capture the condensation formed through the cooling process.

Specific controls are needed to turn on and off AHUs and these are often integrated with Building Management Systems (BMS).

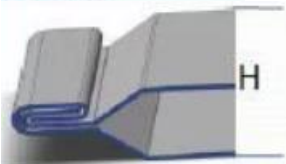
The Humidist AHU design suits rooftop or plant room applications and are fully factory assembled and internally wired, and fitted with large access doors allowing for service, cleaning and maintenance.

Customisable options for the AHU

Humidist Technologies offer a variety of options with our AHU range. Our standard range caters for capacities of 500-100,000 CFM.



Excellent stamping structure to minimize pressure drop and achieve higher efficiency

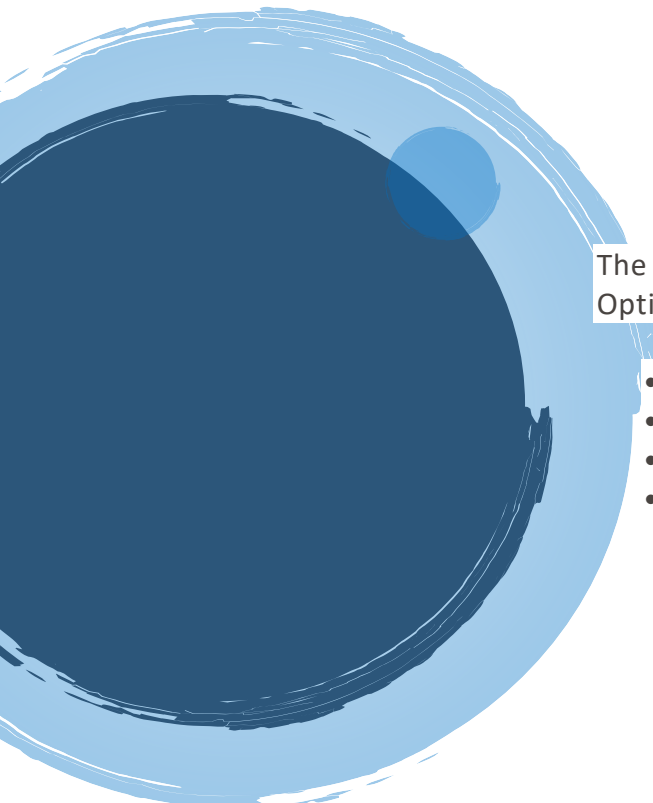


5 layers folded ensure minimum leakage below 0.6%, pressure resistance up to 2000pa

Adjustable spacing to meet different need, and balance the pressure drop and efficiency



Sound sealant of connection prevent the air leakage.



The additional options include:
Options include:

- Hot water, Chilled water or DX coils
- Air filters
- Economy cycle dampers
- Cross flow heat exchangers

[Case studies-1](#)

Comparing energy consumption for Regular AHU with Humidist Advance energy efficient AHU.

[Duty conditions](#)

Capacity – 20000 CFM

RH@25 C – 50%

[Location](#)

Gelcaps Industries (A subsidiary of Aurobindo Pharma Limited)

Naidupeta, Andhra Pradesh

[Contact](#)

For more information on the different options and specifications of Humidist air handling units, take a look at our specifications table . Alternatively, if you would like to speak to one of our expert team members, you can contact us directly mail us to humidist@gmail.com or give us a call on +91 9010065260 and we'd be happy to assist you in finding the right solution.

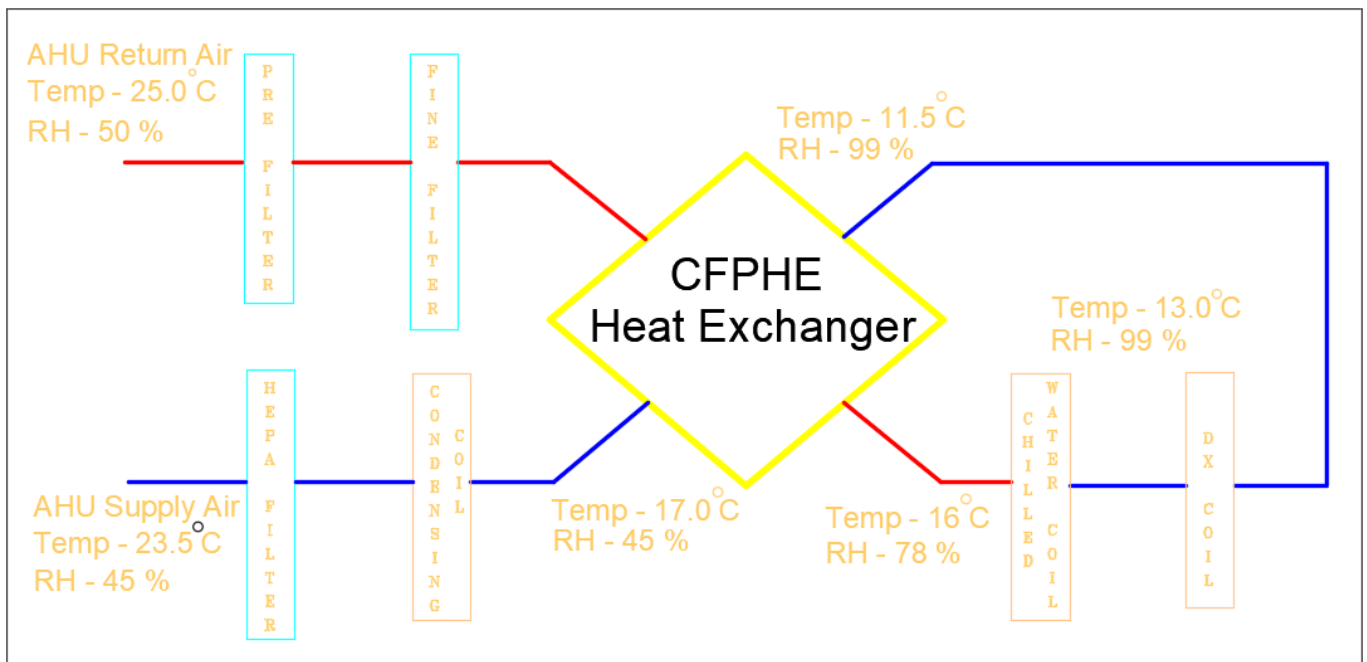
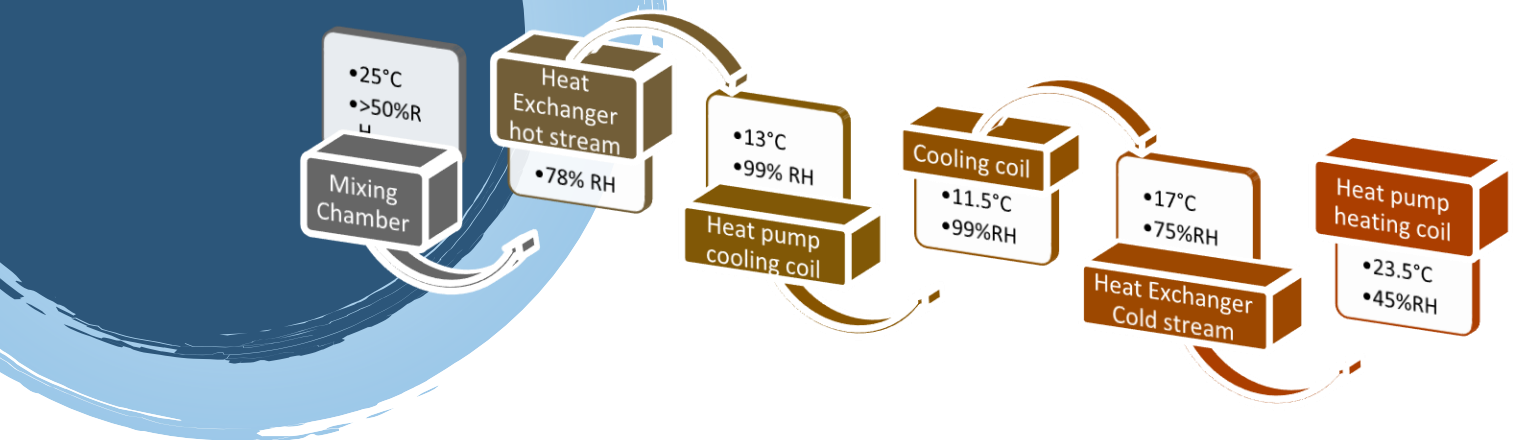


Energy Saving options & reference calculations

Air Flow rate **20000 CFM**
39440 Kg/per hour

	Regular AHU with Existing conditions	Proposed Conditions only Cross flow HE	Proposed Conditions including DX HP
AHU inlet Air temp	25°C minimum	18°C	13°C
RH	50%	78%	100%
Humidity ratio	9.92 gr/kg	9.92 gr/kg	9.37 gr/kg
Total Humidity	391.2 kg	391.2 kg	369.6 kg
Enthalpy	50.41 kJ/kg	43.28 kJ/kg	36.70 kJ/kg
Cooling Load			
AHU Cooling coil outlet	11°C	11°C	11°C
RH	99%	99%	99%
Humidity ratio	8.11 gr/kg	8.11 gr/kg	8.11 gr/kg
Total Humidity	319.9 kg	319.9 kg	319.9 kg
Enthalpy	31.5 kJ/kg	31.5 kJ/kg	31.5 kJ/kg
Removed Water Qty	71.4 Kg/hr	71.4 Kg/hr	49.7 Kg/hr
Heat removed	744982 kJ/Hr	464603.2 kJ/Hr	205088 kJ/Hr
in TR	58.84	36.70	16.20
In terms of power 1.2TR/KW	70.6 Kwh	44.0 Kwh	19.4 Kwh
in Rupees @Rs.8.0/KW	564.9 Rs/Hr	352.3 Rs/Hr	155.5 Rs/Hr
Heat Load			
AHU Cooling coil outlet	11°C	17°C	17°C
Enthalpy	31.5 kJ/kg	37.6 kJ/kg	37.6 kJ/kg
Machine Inlet	23.5°C	23.5°C	23.5°C
RH	45%	45%	45%
Humidity ratio	8.11 gr/kg	8.11 gr/kg	8.11 gr/kg
Enthalpy	44.3 kJ/kg	44.3 kJ/kg	44.3 kJ/kg
Heat added	502742 kJ/Hr	261645 kJ/Hr	261645 kJ/Hr
in KW	139.65 Kwh	72.68 Kwh	72.68 Kwh
in terms of Diesel	16.0 Ltrs	8.3 Ltrs	8.3 Ltrs
In electrical KWh			14.5 Kwh
in Rupees @Rs.70/Ltr	1120.9 Rs/Hr	583.4 Rs/Hr	116.3 Rs/Hr
Total Heating and Cooling cost	1686 Rs/Hr	936 Rs/Hr	272 Rs/Hr
Total Savings	1414.02 Rs/Hr		

Change in Temperature and RH at different exchange units.



AHU Duty Conditions

AHU Return air = 20000 CFM (25.5°C @55% RH).

AHU Supply air = 20000 CFM (23.5°C @ 45% RH).

Total Saving per hour = INR 1414.00.

Budgetary price of the System cost = 30 Lakhs.

ROI < 3 months

(The ROI is Only on the difference in power savings, when compared with regular conventional AHU).